Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

HISTORY OF GARDEN VEGETABLES.

BY E. L. STURTEVANT.

(Continued from p. 987, Vol. 1888.)

LIMA BEAN, *Phaseolus lunatus* L.

THIS bean is of American origin, as its seed has been found in the mummy pits of Peru,[1] and Bentham cites specimens spontaneous in the region of the River Amazon and Central Brazil.[2] Thevetus, in 1558, published his "Les Singularities de la France Antarctique ou Amerique," and in this he speaks of the "Americanorum Faba, omnino alba, valde compressæ, nostratibus latiores et longiores," which is probably this species. The striæ radiating from the eye of the Lima bean make its identification very easy, and hence we cannot be in error in our recognition of the figures given by Lobel[3] in 1591, Clusius[4] in 1601, J. Bauhin[5] in 1651, and Chabræus[6] in 1673, and Clusius notes that he first grew it in 1576.

The synonymy, as I have studied it out, is as follows:

Phaseoli magni late albi. Lob. Ic., 1591, 2, 60.

B. peregrini I. genus alterrum. Clus. Hist., 1601, 2, 223 (seen in 1576) fig.

Phaseolus, lato, striata, sive radiato semine. J. Bauh., 1651, II., 267, fig.

P. novi orbis, latus, totus candidus similaci hortensis affinis. J. B., 1651, II., 268, fig. Chabr., 1673, 137, fig.

Phaseolus lunatus, L. sp., 1763, 1016.

P. inamœnus, L. sp., 1763, 1016.

P. bipunctatus. Jac. Hort., I., t. 100, ex Mill. Dict.

P. rufus. Jacq. Hort., I., 13, t. 34, ex Mill. Dict.

P. saccharatus. Macfad., 1837, 282.

P. puberulus. Kunth. Syn., 1825, IV., 106.

Bushel or Sugar Bean. A Treat. on Gard. (1818[?]).

---

[1] Squiers. Peru, 78.

[2] Decandolle. Orig. des Cult. Pl., 276.

[3] Lobel. Ic., 1591, 2, 60.

[4] Clusius. Hist., 1601, 223.

[5] J. Bauhin. 1651, II., 268.

[6] Chabræus. Ic. et Sciag., 1673, 137.

Sugar Bean. Maycock, Barb., 1830, 293.

Lima Bean. McMahon, 1806.

This bean requires a warm season, and hence is not grown so much in northern and central Europe as in this country. Vilmorin[7] describes three varieties and names two others. Martens,[8] however, describes five well marked varieties.

1. The *large white Lima* is among those figured by Lobel[10] and by J. Bauhin,[11] and this places its appearance in Europe in 1591, and according to Martens it is the *Phaseolus inamœnus* L. It was in American gardens[9] in 1828, and probably before.

2. The *potato Lima* is a white bean, much thickened and rounded as compared with the first. It seems to be fairly figured by Lobel[10] in 1591, and to be the *Phaseolus limensis* Macfad.[12] justly esteemed in Jamaica.

3. The *small white Lima*, or *Sieva*, *saba*, *Carolina*, *Carolina sewee* and *West Indian*, is esteemed on account of its greater hardiness over the other varieties. It is also well figured by Lobel in 1591, under the name Phaseoli parvi pallido-albi ex America delati. On account of the names, and the hardiness of the plant, and as being probably cultivated by the Indians, I am disposed to suggest that it may be the Bushel or Sugar bean, esteemed very delicate, and of various colors, as white, marbled, and green, and grown in Virginian gardens before 1818.[13] Lawson[14] in 1700–8 says: "The Bushel bean, a spontaneous growth, very flat, white, and mottled with a purple figure, was trained on poles" in the Carolinas. The Sieva, if a synonym of the Bushel bean, is the white form, and was in American gardens before 1806. Vilmorin mentions a variety of the Sieva spotted with red.

4. The *speckled Lima* has white seeds striped and spotted with a deep, dark red. The figures of Lobel, 1591, under *Phaseoli rubri*, very well represent the cultivated variety, as also a sort sent

---

[7] Vilmorin. Les Pl. Pot., 1883, 278.

[8] Martens. Die Gartenbohn, 1869, 96.

[9] Fessenden. New Am. Gard., 1828, 36.

[10] Lobel. Ic., 1591, 260.

[11] J. Bauhin. Hist., 1651, II., 168.

[12] Macfadyen. Jam., 1837, 280.

[13] A Treatise on Gardening; by a Citizen of Va., n. d., 275.

[14] Lawson. A Voyage to Carolina, 76, 77.

me as growing spontaneously in Florida in abandoned Indian fields.

5. The *large red* I cannot trace; it may be the blood red bean Martens received from Texas, Sierra Leone and Batavia. It differs from the next but in size.

6. The *small red* answers well to the description given of *Phaseolus rufus* Jacq. by Martens, and this put its appearance at 1770.

These six varieties, with their synonyms, include all the Lima beans with which I am acquainted, but there are a number of other sorts described, which sooner or later will appear and be claimed as originations. A careful reflection over my list will clearly convince that our varieties are all of ancient occurrence, and that there have been no originations under culture within modern times. A black white-streaked form is recorded in Cochin China by Loureiro; a white black-streaked form is figured by Clusius in 1601; a black as *Phaseolus derasus*, Schrank, in Brazil. The *P. bipunctatus* Jacq. has not as yet reached our seedsmen, although grown at Reunion under the name of pois du Cap. Martens describes several others with a yellow band about the eye, and variously colored, and one with an orange ground and black markings occurs among the beans from the Peruvian graves at Ancon at the National Museum.

The Lima bean is called in India[15] the *Duffin* or *Vellore bean;* in Jamaica[16] the *Sugar bean,* as also in Barbadoes.[17] In France, *Haricot de Lima, feve creole;* in Germany, *Lima bohne;* in Italy, *Faguiolo di Lima;* in Spain, *India de Lima;*[18] in Ceylon, *oorudumbala.*[19]

LOVAGE. *Ligusticum levisticum* L.

This plant is yet to be rarely found in gardens. At the present day, says Vilmorin, Lovage is almost exclusively used in the manufacture of confectionery; formerly the leaf stalks and bottoms of the stems were eaten, blanched like celery.[20] The whole plant has a strong, sweetish, aromatic odor, and a warm, pungent taste, and is probably grown now in America, as in 1806, rather as a medicinal than as a culinary herb. It appears to have been known to Ruellius[21] in 1536, who calls it *Levisticum officinarum*, and was only seen in gardens by Chabræus[22] in 1677.

---

[15] Ainslie. Mat. Med., I., 28.

[16] Macfadyen, l. c.

[17] Maycock, Fl. Barb., 293.

[18] Vilmorin, l. c.

[19] Birdwood. Veg. Prod. of Bomb., 122.

[20] Vilmorin. The Veg. Gard., 1885, 316.

It is called in France *ache de montagne*, *liveche ;* in Germany, *liebstock ;* in Spain, *apio de monte.*[22]

MALLOWS. *Malva crispa* L.

This plant is considered nearly indispensable in French gardens, although it is not an esculent, but the leaves are used for garnishing.[23] It was known to Camerarius[24] in 1588, and was only known to Dodonæus,[25] in 1616, as a cultivated plant. The mallows which were used by the Romans as a pot-herb appear to be the *Malva rotundifolia* L. Even Pythagoras thought much of this spinage, and it is even now said to be grown extensively on the banks of the Nile. *M. sylvestris* L. appears also to have been grown by the Romans as a pot herb, and *M. verticillata* L. has been recognized among Chinese vegetables from the 5th century. All these, and, indeed, all malvas have now disappeared from cultivation as edibles in European countries.

The Curled Mallow is called in France *mauve frisée*, *mauve crepue*, *mauve à feuilles crispées ;* in Germany, *krausblättrige malve ;* in Italy, *malva crespa.*

The *M. rotundifolia* L. was carried to North America previous to 1669, and now appears as a weed. It is the *mallows* of Britain and America, the *mauve* of France, the *runde kasepappel* of Germany, the *malva* of Italy, the *moloha* or *molohe* of Greece. In Yemen called *hobsen.*[26]

The *M. verticillata* L. is called in Egypt *khobbeyzeh ;* in China *tung han ts'ai.*[27]

---

[21] Ruellius. De Nat. Stirp., 698.

[22] Chabræus. Icones et Sciag., 1677, 401.

[23] Vilmorin. The Veg. Gard., 319.

[24] Camerarius. Hort., 1588.

[25] Dodonæus. Pempt., 1616, 653.

[26] Pickering. Ch. Hist., 348.

[27] Gard. Chron., July 10, 1886, 41.

MANGOLD. *Beta vulgaris*, var.

Mangolt was the old German name for the Chard, or rather for the beet species, but in recent times it has become applied to a large growing root of the beet kind, used for forage purposes. In the selections size and the perfection of the root above ground have been important elements, as well as the desire for novelty, and hence we have a large number of very distinct appearing sorts,—the long red, about two-thirds above ground, the olive shaped or oval, the globe, and the flat-bottomed Yellow d'Obendorf. The colors to be noted are the red, the yellow, and the white. The size often obtained in single specimens is enormous; a weight of 135 pounds[28] has been claimed in California, and Gasparin in France vouches for a root weighing 132 pounds.[29]

I have ascertained very little concerning the history of mangolds. They certainly are of modern introduction. Olivier de Serres[30] in France, 1629, describes a red beet which was cultivated for cattle-feeding, and speaks of it as a recent acquisition from Italy. In England it is said to have arrived from Metz[31] in 1786, but I find a book advertised of which the following is the title:—Culture and use of the Mangel Wurzel, a Root of Scarcity, translated from the French of the Abbe de Commerell, by J. C. Lettsom, with colored plates, third edition, 1787,[32]—by which it would appear that it was known earlier. McMahon[33] records it in American culture in 1806. Vilmorin describes sixteen kinds, and mentions many others.

The beet is one of the plants most easy to improve by selection, as the experience of Vilmorin proves, as well as the more perfected varieties which are constantly being advertised. I doubt not but that the prototypes of all the distinct forms could be found in nature, but unfortunately I find no descriptions which I can use to illustrate this idea, which receives such constant support with other plants whenever facilities for investigation occur.

---

[28] U. S. Department of Agriculture Report, 1866, 597.

[29] Pr. Es. H. Soc., 3rd Ser., IX.. 258, note.

[30] Decandolle. Geog. Bot., 831.

[31] Sinclair. Hort. Gram., Woburn, 1824, 410.

[32] Wesley: Nat. Hist. Book Circular, No. 71, 1886.

[33] McMahon. Am. Gard. Cal., 1806, 187.

The *mangold*, *mangold-wurzel* or *Root of Scarcity* is called in France *Disette*, *Racine d'abondance*, *Betterave Disette;* in Germany, *mangel-worzel*, *futter-rube*, *futter-runklerube;* Flanders and Holland, *mangel-wortel;* in Spain *remolacha de grav cultivo*, *betabel campestu.*

MARTYNIA. *Martynia*, sp.

The fruits of the Martynias, when gathered while young and tender, make an excellent pickle, and they are occasionally grown in our gardens for this purpose. There are two species.

M. proboscidea Glox. This purple-flowered form occurs wild on the banks of the Mississippi and lower tributaries to New Mexico. It is also cultivated in gardens further north, about which it is apt to become naturalized.[34] It is mentioned under American cultivation in 1841.[35] It was known in England as a plant of ornament in 1738,[36] and perhaps there has scarcely as yet entered the kitchen garden.

M. lutea Lindl. This species, originally from Brazil, has yellow flowers.[37] It does not appear to be in American gardens, as I have never seen it, nor is its seed advertised by our seedsmen. It reached Europe in 1824.[38] It is described by Vilmorin as under kitchen garden culture.

The Martynia, or Unicorn plant,[39] is called in France *martynia*, *cornaret*, *cornes du diable*, *bicorne*, *ongles du diable;* in Germany, *gemsenhorner;*[37] in Italy, *testa di quaglia;*[40] in Malta, *testa di quaglia.*[36]

MEADOW CABBAGE. *Cirsium oleraceum* Scop.

This plant is included among vegetables by Vilmorin,[41] although he says it does not appear to be ever cultivated. The swollen root-stock, gathered before the plant flowered, was formerly used as a table vegetable. It does not appear to have ever reached American gardens or use.

---

[34] Gray. Syn. Flora, II., 321.

[35] Kenrick. New Am. Orchard, 3d ed., 1841, appendix.

[36] Gard. Chron., 1843, 608.

[37] Vilmorin. Les Pl. Pot., 329.

[38] Noisette. Man., 1829, 537.

[39] Burr. Field and Gard. Veg., 1863, 612.

[40] A Smith. Treas. of Bot.

[41] Vilmorin. Les Pl. Pot., 1883, 157; The Veg. Gard., 1885, 321.

MELON. *Cucumis melo* L.

Both the word *melon* and *pepon* have been used in a generic sense, and sometimes as synonymous. Albertus Magnus,[42] in the thirteenth century, says, *melons*, which some call *pepones*, have the seed and the flower very nearly like those of the cucumber, and also says in speaking of the cucumber that the seeds are like those of the *pepo*. Under the head of the watermelon, *citrullus*, he calls it *pepo*, with a smooth, green skin, but the *pepo* is commonly yellow and of an uneven surface, and as if round semicircular sections were orderly arranged together. In 1536 Reullius[43] describes our melon as the *pepo;* in 1542 Fuchsius[44] describes the *melon*, but figures it under the name of *pepo*. In 1550 Roszlin[45] figures the melon under the name of *pepo*, and in 1558 Matthiolus[46] figures it under the name of *melon*. The Greek name of *pepon*, and the Italian, German, Spanish, and French of *melon*, variously spelled, are given among synonyms by various authors[47] of the sixteenth century, and *melones* sive *pepones* are used by Pinæus in 1561,[47] *melone* and *pepone* by Castor Durante[48] in 1617, and by Gerarde[49] in England, in 1597. *Melons* and *pompions* are used synonymously, and the melon is called *muske-melon* or *million*.

Whether the ancients knew the melon is a mattter of doubt. Dioscorides,[50] in the first century, says the flesh or pulp (cara) of the *pepo* used in food is diuretic. Pliny,[51] about the same period, says a new form of cucumber has lately appeared in Campania called *melopepo*, which grows on the ground in a round form, and he adds, as a remarkable circumstance, in addition to their color and odor, that when ripe, although not suspended, yet the fruit separates from the stem at maturity. Galen,[52] in the second century, treating of medicinal properties, says the autumn fruit [*i.e.*, ripe] do not excite vomiting as do the unripe, and further says mankind abstain from the inner flesh of the *pepo*, where the seed is borne, but eat it in the *melopepo*. A half century later Palladius[53] gives directions for planting *melones*, and speaks of them as being sweet and odorous. Apicius,[54] a writer on cookery, about 230 A. D., directs that *pepones* and *melones* be served with various spices corresponding in part to present customs; and Nonnius, an author of the sixth century, speaks of cucumbers which are odoriferous.[55] In the seventh century Paulus Ægineta,[56] a medical writer, mentions the medicinal properties of the *melopepo* as being of the same character, but less than that of the *pepo*, and separates these from the *cucurbita* and *cucumis*, not differing from Galen, already quoted.

---

[42] Albertus Magnus. De Veg., Jessen ed., 1867, 501.

[43] Ruellius. De Nat. Stirp., 1536, 503.

[44] Fuchsius. De Stirp., 1542, 702, 701.

[45] Roszlin. Kreuterb., 1550, 116.

[46] Matthiolus. Com., 1558, 262.

[47] Pinæus. Hist., 1561, 194. Camerarius Epit., 1586, 296, etc.

[48] Castor Durante. Herb., 1617, 345.

[49] Gerarde. Herb., 1597, 775, 770.

[50] Dioscorides. Vergelius trans., 1532, 219.

[51] Plinv, Lib. XIX., c. 23.

From these remarks concerning odor and sweetness, which particularly apply to our melon, and the mention of the falling spontaneously of the ripe fruit, a characteristic of no other garden vegetable, we are inclined to believe that these references are to the melon, and more especially so as the authors of the sixteenth and following centuries make mention of many varieties, as Amatus Lusitanus,[57] in 1554, who says, "*quorum varietas ingens est*," and proceeds to mention some as thin skinned, others as thicker skinned, some red fleshed, others white.

I know scarcely enough about melons as yet to classify into types, as I am only acquainted with fifty-eight names of varieties under growth, but varieties occur that can be described as round, flattened, oblong, oval, long; as smooth, netted, ribbed, warted; as white, green, red, orange fleshed; as early, late, and winter.

The following may be considered as notes only; not as complete classification, nor even as any classification, and a single and the earlier reference is in most cases only used.

---

[52] Galen. De Alim., Lib. II.; Gregorius ed., 1547, 97.

[53] Palladius, Lib. IV., c. 9; Lib. V., c. 3; Lib. VI., c. 15.

[54] Apicius Cœlius. De Opsonibus, etc., Amsterdam, 1709, 82.

[55] Nonnius. Quoted from Lister in Apulius, l. c.

[56] Paulus Ægineta. De Simp., 1531, 76.

[57] Amatus Lusitanus. In Diosc., 1554, 265.

1. Early and late melons, as also winter melons, are described by Amatus[56] in 1554; summer and winter by Bauhin[57] in 1623.

2. White and red fleshed are described by Amatus in 1554; yellow fleshed by Dodonæus in 1616; green fleshed by Marcgrav[62] in 1648; green, golden, pale yellow, and ashen, by Bauhin[57] in 1623.

3. Sugar melons are named *sucrinos* by Ruellius[58] in 1536; *succrades rouges* and *succrades blanches* by Chabræus[59] in 1677; and *succrius* and *succredes* by Dalechampius[60] in 1587.

4. Netted melons are named by Camerarius[63] in 1586, as also the ribbed. The warted are mentioned in the Adversaria[64] in 1570; rough, warted, and smooth by Bauhin[57] in 1623.

5. The round, long, oval, and pear-form by Gerarde[65] in 1597; the quince form by Dalechampius[66] in 1587; the oblong by Dodonæus in 1616; the round, oblong, depressed, or flat by Bauhin[57] in 1623.

The quality of melons varies widely, even in the same variety, under different conditions of growth, as was well known in 1513, when a Spanish author, Herrera,[67] says, "If the melon is good, it is the best fruit that exists, and none other is preferable to it. If it is bad, it is a bad thing. We are wont to say that the good are like good women, and the bad like bad women."

The melon reached America nearly with the discovery, for in 1494 ripe *melons* are recorded as grown by the companions of Columbus.[68] In 1516 "*melons* different from those here" are mentioned in Central America,[69] but perhaps not the melon, but a cucurbit. In 1535, however, Cartier[70] speaks of "*musk melons*" on the St. Lawrence. In New Mexico, *melons* are named by Gomara[71] in 1540, and also 1542.[72] In 1565, *melons* were abounding in Hayti.[73] In 1582 de Espijo[74] speaks of *melons* and pumpkins as grown by the Indians of New Mexico; in 1584 as found in Virginia[75] by Captains Amidos and Barlow; and again as *muskemelons* in 1609.[76] In 1609 also they were seen on the Hudson River,[77] and are described as abundant in New England by Master Graves[78] in 1629, as also by Woods.[79]

---

[56] Amatus Lusitanus. In Diosc., 1554, 265.

[57] Bauhin. Pinax, 1623, 310, 311.

[58] Ruellius, l. c.

[59] Chabræus. Ic. et Sciag., 1677, 134.

[60] Hist. Gen., Lugd., 1587, 623.

[61] Dodonæus. Pempt., 1616, 664.

[62] Marcgrav. Bras., 1648, 22.

[63] Camerarius. Epit., 1586, 296.

[64] Pena and Lobel. Adv., 1570, 285.

[65] Gerarde, l. c.

[66] Hist. Gen., Lugd., l. c.

[67] Herrera. Agric. Gen., ed. 1809, II., 114, quoted from D. C. Geog. Bot., 906.

[68] F. Colombo. Hak. Col., II., 533.

[69] Narrative of Pasceral de Andagoya, Hak. Soc. Ed., 29.

[70] Pinkerton's Voy., XII., 652; Hakl. Voy., III., 276.

In 1806 McMahon names thirteen kinds under American culture. At the present time at least a hundred different names of varieties can be collected.

The *melon* or *muskmelon* is called in France and Spain, *melon;* in Germany, *melone;* in Flanders and Holland, *moloen;* in Italy, *popone, melone;* in Portugal, *melas;*[80] in Greece, *peponia;* in Russia, *dina;*[81] in Norway, *melon;*[82] in Arabic, *beteekh, kirboozeh,*[83] *domeyri, dremmaijre;*[81] in Bengali, *kurbooja,*[83] *khurbuz,*[84] *phuti;* in Burmah, *tha-khwahmwæ:*[84] in Comanche Indian, *pehena;*[86] in Ceylon, *rata-komadu;* in Hindustani, *karbooja;*[83] in Japan, *tenkwa, kara uri;*[87] in Malay, *labofrangee;*[83] in Persia, *kharbuza;*[85] in Sindh, *gidhro;*[83] in Tagalo, *tabogo;*[85] in Tamil, *molam;*[84] in Tartar and Turkish, *kaun.*[81]

MINT. *Mentha viridis* L.

This garden herb was well known to the ancients, and is mentioned in all early mediæval lists of plants. Amatus Lusitanus[88] in 1554 says it is always in gardens, and later botanists confirm this statement for Europe. It was in American gardens in 1806,[89] and probably far earlier, for it was collected by Clayton in Virginia about 1739[90] as a naturalized plant.

---

[71] Wipple & Turner. Pac. R. R. Repts., III., III.

[72] Cabeca de Vaca, Relation. Smith's ed., note, p. 165.

[73] Benzoni. Hist. of the New World, Lond., 1857.

[74] Hakl. Voy., III.

[75] Pinkerton's Voy., XIII.

[76] A True Decl. of Va., 1610, 13.

[77] Delafield. N. Y. Agr. Soc. Trans., 1850, 359.

[78] Mass. Hist. Soc. Coll., 1st ser., I., 124.

[79] Woods. New Eng. Prosp., 1st ed., II.

[80] Vilmorin. Les Pl. Pot., 1883, 332.

[81] Decandolle. Geog. Bot., 906, 908.

[82] Schubeler. Culturpflanz, 108.

[83] Birdwood. Veg. Prod. of Bomb., 156, 301.

[84] Drury. Useful Pl. of Ind., 172.

[85] Pickering. Ch. Hist., 229.

[86] Marcy. Red River, 275.

[87] Kaempfer. Amoen., 811; Thunb. Jap., 323.

[88] Amatus Lusitanus. In Diosc., 1554, 319.

Mint, green mint, or spearmint is called in France *menthe vert*;[91] in Spain, *hierva buena*, *ortelana*; in Italy, *menta*; in Germany, *muntz*; in Arabic, *nahanaha*;[92] in the Mauritius, *menthe*;[93] in India, *podeena*;[94] in the Deccan, *pahari-poodenah*.[95]

MUGWORT. *Artemisia vulgaris* L.

This plant, of insignificant use, is yet included among the plants of the garden by European writers. The leaves are strong, bitter, and aromatic, and are sometimes used for seasoning.[96] It was formerly employed to a great extent for flavoring beer, before the introduction of the hop,[97] and the leaves are said to have been used for food in China in the fourteenth century.[98] It is as yet scarcely in the vegetable garden, and it is unnecessary to inquire when the first entry was effected.

The *mugwort* is called in France, *armoise*, *couronne de St. Jean*, *herbe a cent gonts*; in Germany, *beifuss*; in Holland, *bijvoet*; in Italy, *santolina*; in Arabic, *artemasaya*, *utmeesa*; in Hindustani, *nagdowna*; in Persia, *birunjasif*; in Telugu,[99] *davanamu*; in Japan, *gai* or *jamogi*.[100]

MUSTARD. *Sinapis* sp.

Mustard was well known to the ancients, but the use seems to have been more medicinal than dietetic, yet Apicius,[101] about 230 A. D., makes frequent uses of it in his receipts on cookery, and in an edict of Diocletian, A. D. 301, it is mentioned along with alimentary substances. In Europe, during the middle ages, mustard was used with the salted meats which formed such a large portion of the winter diet of our ancestors.[102] It is, however, as a vegetable that we treat of it here.

---

[89] McMahon. Am. Gard. Cal., 1806.

[90] Gronovius. Virg., 1762, 89.

[91] Vilmorin. Les Pl. Pot., 1883, 353.

[92] Camerarius. Epit., 1586, 477.

[93] Bojer. Hort. Maur., 1837, 247.

[94] Speede. Ind. Handb. of Gard., 1842, 183.

[95] Birdwood. Veg. Prod. of Bomb., 64, 241.

[96] Vilmorin. Les Pl. Pot., 1883, 12.

[97] Johnson. Useful Pl. of Great Brit., 154.

[98] Bretschneider. Bot. Sin., 51.

[99] Birdwood. Veg. Prod. of Bomb., 47.

[100] Kaempfer. Amoen., 1712, 897.

[101] Apicius. De Opsoniis, etc., Anesblodami, 1709.

Sinapis alba L.—White mustard is grown in gardens for the young leaves, which are used in salads, and about London is grown in gardens to a large extent. In 1542 Fuchsius,[103] a German writer, says it is planted everywhere in gardens. In 1597, in England, Gerarde[104] says it is not common, but he has distributed the seed, so that he thinks it is reasonably well known. It is mentioned in American gardens in 1806.[105]

White mustard, or Salad mustard, is called in France, *moutarde blanche*, *moutardin*, *plante au beurre*, *seneve blanc ;* in Germany, *gelber senf ;* in Flanders, *witte mostaard ;* in Holland, *gele mosterd* or *mostaard ;* in Italy, *senapa bianca ;* in Spain, *mostaza blanca ;*[106] in Greece, *agriourouva*, *napi*, *sinapi ;*[107] in China, *kai kie*.[108]

Sinapis nigra L.—The black mustard is described as a garden plant by Albertus Magnus[109] in the thirteenth century, and is mentioned by the botanists of the sixteenth century. It is, however, more grown as a field crop for its seed, from which the mustard of commerce is derived, yet finds place also as a salad plant. Two varieties are described, the *black mustard of Sicily* and the *large-seeded black*.[110] It was in American gardens in 1806 or earlier.

Black mustard, *brown mustard*, or *red mustard* is called in France, *moutarde noire*, *navuce rouge*, *russebau*, *seneve noir ;* in Germany, *brauner senf ;* in Flanders, *zwarte mustaard ;* in Holland, *bruine mosterd ;* in Spain, *mostaza nigra ;*[106] in Italy, *senape*, *senapi*.[107]

Mustard.—Chinese Cabbage-Leaved.—This vegetable, the species not indicated, is described by Vilmorin[106] as under European culture, and he says that in warm countries it forms one of the most highly esteemed green vegetables. In China *Sinapis*

---

[102] Pharmacographia, 1879, 64, 69.

[103] Fuchsius. De Stirp., 1542, 537.

[104] Gerarde. Herb., 1597, 190.

[105] McMahon. Am. Gard. Cal., 1806.

[106] Vilmorin. Les Pl. Pot., 1883, 355.

[107] Pickering. Ch. Hist., 246.

[108] Bretschneider. On the Study, etc., 17.

[109] Albertus Magnus. De Veg., Jessen ed., 1867, 568.

[110] Vilmorin. The Veg. Gard., 1885, 352.

brassicata L. is said to be cultivated abundantly,[111] and *S. chinensis* L. to occur in Cochin-China in two varieties. *S. pekinensis* Lour. was introduced to France from China in 1837.[112] This plant, says Livingston,[113] is more extensively used by all classes of the Chinese than any other,—perhaps than all the others together. It is carried about the public streets for sale, boiled, in which state its smell is extremely offensive to Europeans. It is recorded as in the United States by Burr[114] in 1863. In Portugal its seeds were sown by Loureiro on his return from Cochin-China in the eighteenth century.[111]

THE SEGREGATIONS OF POLLED RACES IN AMERICA.

BY R. C. AULD.

COMING to America itself it is interesting to investigate the tendency toward the throwing off the horns among the native cattle, as developed by the environment of so decidedly different characters from that the species was formerly accustomed to.

South America.—In a passage quoted from Major Hamilton Smith, allusion was made to the occurrence of polled cattle in Spain; and on the supposition that they may have been transported thence to form the polled breed of Assumption in Paraguay. Darwin seems to have disregarded this view; for his opinion is that they "appeared suddenly from what we call spontaneous variation," this being the only instance in which the origin and formation of a polled race were fully known.[1]

---

[111] Miller's Dict., 1807.

[112] Bon Jard., 1882, 533.

[113] Livingston. Hort. Trans., V., 54.

[114] Burr. Field and Gard. Veg., 1863, 386.

[1] Letter to Macdonald and Sinclair, authors of "History of Polled Cattle."